

## RESEARCH ARTICLE

# An Examination Of The Role Of Vocational Training Centers In Ensuring School-Industry Cooperation From Employer's Perspective: The Ostim Case

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## Abstract

*This study examines the role of Vocational Training Centers in school-industry cooperation from the perspective of employers. Within the scope of the research, face-to-face interviews were conducted with 12 business owners operating in Ankara Organised Industrial Zone who have cooperated with Vocational Training Centers. The research reveals that vocational education centers in Turkey are of great importance in terms of training graduates in line with the needs of the business world. However, employers have serious difficulties in recruiting staff and mostly meet their labour force needs by employing foreign workers. Furthermore, school-industry cooperation is essential so that the education curriculum can better meet the needs of the business world and provide students with workplace experience. Employers value the "certificate of mastery" obtained at the end of training to increase employability. The study also underlines the need for effective school-industry co-operation mechanisms. A strong partnership between business and educational institutions can improve the vocational education system in Turkey and prepare the future workforce.*

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## Öz

*Bu çalışma, işverenlerin perspektifinden Mesleki Eğitim Merkezleri'nin okul-sanayi işbirliği içindeki rolünü incelemektedir. Araştırma kapsamında, Mesleki Eğitim Merkezleri ile işbirliği yapmış ve Ankara Organize Sanayi Bölgesi'nde faaliyet gösteren 12 işletme sahibi ile yüz yüze görüşmeler gerçekleştirilmiştir. Araştırma, Türkiye'deki mesleki eğitim merkezlerinin, iş dünyasının ihtiyaçlarına uygun mezunlar yetiştirme açısından büyük önem taşıdığını ortaya koyuyor. Ancak işverenler eleman temini konusunda ciddi anlamda zorluk yaşamakta ve işgücü ihtiyacını çoğunlukla yabancı işçi istihdamı ile karşılamaktadır. Ayrıca eğitim müfredatın iş dünyasının ihtiyaçlarını daha iyi karşılamasını sağlamak ve öğrencilere işyeri deneyimi sağlamak için okul-sanayi işbirliği esastır. İşverenler istihdam edilebilirliği artırmak için eğitim sonunda elde edilen "ustalık sertifikasına" değer veriyor. Çalışma aynı zamanda etkili okul-sanayi işbirliği mekanizmalarına olan ihtiyacın altını çiziyor. İş dünyası ile eğitim kurumları arasındaki güçlü bir ortaklık, Türkiye'deki mesleki eğitim sistemini geliştirebilir ve geleceğin işgücünü hazırlayabilir.*

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## Introduction

The lack of skills valued in local and global labour markets has been the root cause of high youth unemployment and has, therefore, become a constraint to economic growth, employment and income. By 2030, 77.0 per cent of the world's labour force will be young people aged 15-24. In contrast, 70.9 million young people are estimated to be unemployed (Berg et al., 2021). However, the global skills and job mismatch continues to widen, with more young people withdrawing from the labour market each year. As a solution to this problem, many countries are adopting vocational education. The main objective of vocational education is to prepare graduates for the world of work in terms of skills, knowledge and competence while also to qualify them to work independently or be hired for existing vacancies. In terms of industry and employers, it is to ensure the supply of employees who can increase the national income and productivity of the country and make it competitive in the global economy. However, many vocational school graduates have not been fully absorbed by industries or the business world. The main reason is the lack of coordination between the labour market and the education system. Vocational Training Centers (VTCs) are structures established precisely for this purpose. Therefore, vocational education systems undertake the mission of successfully closing this gap by creating a skilled and job-ready labour supply for the labour market. Today, emerging and developing economies are trying to reform their vocational education systems with various tools (Gianchandani, 2018).

Vocational education plays a crucial role in bridging the gap between educational institutions and industries, fostering an environment conducive to the development of students into skilled professionals (Byrne, 2005, p.1). In this way, it is aimed to provide students with practical experience and practical training as well as to increase their theoretical knowledge. In increasing school-industry cooperation, it is essential that both students, industrialists and educational institutions benefit. Thanks to this symbiotic relationship, students gain sector-specific skills, sectors gain skilled employees, and educational

institutions can increase their demandability (Guthrie, 2010).

Ensuring school-industry cooperation comes to the fore at this point. Co-operation between schools and enterprises in vocational education and training (VET) remains a major challenge, including in many developed countries. Extensive research highlights a general lack of cooperation between schools and workplaces in VET (Gessler, 2017; Louw, 2017). The absence or underdevelopment of such cooperation tends to result in a weak link between school-based learning and workplace learning (Billett, 2008).

The aim of this study is to examine the role of vocational training centers in school-industry cooperation from the perspective of employers. As can be seen in the literature review, which is the next section, research on the related field in Turkey is quite limited. Therefore, another aim of the study is to contribute to this gap in the literature. In this context, (1) What are employers' views on the role of vocational education centers in school-industry cooperation? (2) What are the problems of employers regarding school-industry cooperation? (3) What are the expectations of employers for vocational training centers to improve school-industry cooperation?

The study consists of three parts. In the first part, the theoretical framework of school-industry cooperation is drawn and a comprehensive literature review on the role of vocational education centers in school-industry cooperation is given. In the second part, the methodology of the research is given. In the third section, the research findings are analysed and in the last section, policy recommendations for developing school-industry cooperation through VTCs are given.

## Literature Review

School-industry cooperation is rooted in key theories. The Human Capital Theory (Becker, 1964) underscores the value of education and training in enhancing individuals' productivity and economic worth, positioning education as an investment in human capital that industries aim to harness. The Stakeholder Theory (Freeman & Medoff, 1984) highlights the interconnected interests of stakeholders, including schools, industries,

students, and the community, emphasizing the need for a collaborative relationship where all parties contribute to a common goal. Applying these theories to school-industry collaboration presents a mutually beneficial opportunity for students, educational institutions, and industries. Schools can partner with industries through internships and projects, offering students practical learning experiences. Industries, in turn, can leverage students' innovative potential and cultivate a skilled workforce, fostering economic growth and labour force development. Nonetheless, there is no one-size-fits-all approach to vocational education-industry collaborations, with their success contingent on each country's socio-economic context and labour market demands.

Despite its recognized importance, school-industry cooperation remains incomplete, as Karabulut noted (2022). While all stakeholders acknowledge the strategic significance of Turkey's vocational education and training system for its economic and social development, they have yet to take unified action to address its challenges. Vocational training centers are pivotal in equipping individuals with practical skills tailored to industry needs, using a competency-based approach that combines hands-on experience with specific professional standards (Lund & Karlsen, 2019). This approach not only enhances students' practical skills but also fosters professionalism and work ethic. Vocational education and training (VET) programs excel by integrating workplace learning, and exposing students to real-world working conditions, thereby bridging theory-practice gaps. Success in vocational training depends on the center's ability to adapt training programs to evolving industry needs, which necessitates active communication with industry players (Braun et al., 2011). Toz (2019) evaluated issues and solutions in Turkish vocational education centers based on input from administrators, teachers, employers, and students. Findings indicate that employers face challenges in adapting to changing student profiles and are hindered by workshop and equipment deficiencies.

Vocational education, training, and industry collaborations are recognized globally as

economic growth and development catalysts. Different countries employ unique models reflecting their socio-economic context and labour market demands. Globally, Vocational Education and Training (VET) plays a crucial role in fostering economic growth by equipping individuals with practical skills, promoting social equity, and adapting to technological and labour market changes. Germany, for instance, relies on the dual vocational education system, combining classroom education with on-the-job training, successfully addressing skills mismatches and promoting youth employment. In the UK, vocational education and training span a wide range of offerings, with the 'Apprenticeship Levy' program encouraging employer investment in apprenticeships to close the skills gap and provide opportunities for young people (Dehmel, 2005).

The study by Lerman et al. (2020) focused on the importance of skills certification in apprenticeship training. Their findings suggest that providing a certificate of mastery upon completing apprenticeship training serves as a motivating factor for young employees. Furthermore, this credential plays a significant role in helping young employees adapt to dynamic labour markets. Competence-based training improves the alignment of career and technical education with employer demands through enhanced documentation and validation of career paths and skills.

Schultheiss and Backes-Gellner (2022) argue that enhancing the educational content of vocational education and training (VET) programs is particularly valuable for disseminating innovative knowledge related to emerging technologies. This is especially relevant because VET curricula cover many occupations, including those essential to the labour force, such as middle-skilled occupations. Modifying curricula has the potential to promote the broader adoption of technology throughout the innovation ecosystem, influencing its uptake by both upstream and downstream organizations.

Vocational training can be crucial in integrating refugees, particularly in countries like Germany, Austria, Switzerland, and Denmark, which have a strong tradition of collective skills formation systems and dual vocational training. These

countries have historically achieved remarkable success in integrating young people into the labour market, boasting some of the lowest youth unemployment rates in the OECD world (Ryan, 2001; Busemeyer & Trampusch, 2012). The involvement of employers in vocational training systems offers significant potential for integration. Dual vocational training is expected to be a promising avenue for labour market integration of refugees, providing them with a formal education and the opportunity to gain practical work experience while assimilating the workplace rules, norms, and expected behaviors of the host country (Aerne & Bonoli, 2023).

Özel (2021) conducted a study focusing on transitioning vocational education and training (VET) from a centralized, school-based, and state-controlled structure to a collaborative system emphasising partnerships between educational institutions and industries. The study argues that the successful implementation of VET reforms can be improved through the collaborative efforts of government and employer organizations advocating for the interests of small and medium-sized firms (SMEs).

In Turkey, research on school-industry cooperation predominantly centers around university-industry collaborations, with fewer studies dedicated to vocational education-based school-industry collaborations. For example, Koşan (2003) found that students believe that enhancing the quality of vocational education can boost workforce productivity. Additionally, a study by Tonbul & Kılıçoğlu (2011) on vocational education centers revealed that apprentices felt there was minimal interaction between workplaces and Vocational Education Centers, and teachers often failed to provide information about students' situations or consider the expectations of the employers.

Another recent study by Erdoğan et al. (2020) examined the perspectives of technical teachers working in vocational and technical education institutions. The study found that these teachers believed that graduates from vocational education institutions lacked professional competence and that students struggled to adapt to work discipline. Technical teachers cited the problems in internship education as stemming from enterprises, with

student internship experiences falling short of expectations. The study recommended general reforms in vocational education institutions, increased vocational course hours, and enhanced collaboration between vocational high schools and the industry.

Furthermore, research examining the views of employers and master instructors regarding vocational training center students indicated that 71.1% of them believed that students from these centers had sufficient education levels to learn a profession. However, they noted that theoretical knowledge was only partially applied by students. The study highlighted the need to promote Vocational Education Centers effectively to address Turkey's demand for qualified personnel and to provide an attractive alternative for individuals who do not wish to pursue further post-primary education. The research called for activities to enhance communication and social sharing between teachers, administrators, and workplaces, as well as efforts to raise professional awareness among vocational training center students. Recommendations were made for programs emphasising the importance of vocational education in the country's development (Şar et al., 2011).

ILO (2020) emphasizes the importance of school-industry collaboration in designing and managing apprenticeship programmes. This collaboration involves a variety of stakeholders, including educational institutions, businesses, governments and professional associations. The report emphasizes the need for theoretical and practical training for apprentices, enabling them to improve their professional skills and succeed in the job market. School-industry collaboration can improve the quality of apprenticeship programs by developing training programs that meet apprentices' vocational skills, providing on-the-job training to help them apply their theoretical knowledge, and encouraging apprentice employment through collaboration between schools and businesses.

### **Vocational Education Centers in Türkiye**

Vocational Training Centers in Türkiye were designed with inspiration from apprenticeship

training, which was a part of the *ahi* community/guild culture in the Ottoman Empire. Namely, in the Ottoman Empire, a journeyman who wanted to become a master had to have worked for three or more years, depending on the type of profession, to have no complaints against him during this period, to fulfil his duties properly, to be meticulous, especially in the training of apprentices, to get along well with customers, neighbours and colleagues, and to obtain the approval of the council of masters in the same profession. In addition, only a master can have the right to open an independent workplace (Şahinkesen, 1991, p.392).

Today, apprenticeship training has been regulated by the Ministry of National Education (MEB) to strengthen vocational education and carried out in Vocational Training Centers (VTCs). Vocational education centers try to provide school-industry coordination based on the mission of school-based learning. In this context, these centers aim to prevent youth unemployment by providing skills to young people, who constitute a significant part of the population, and to eliminate the skills supply-demand imbalance, one of the critical problems of the labour market.

Vocational education in Türkiye is strictly regulated by precedent laws, facilitating a well-structured education system. The Turkish National Education Law No. 1739 provides the legislative backbone for vocational education and apprenticeship training (MEB, 1973). The law regulates the functioning of vocational and technical education institutions and sets out the terms and conditions of apprenticeship training. In addition, Law No. 3308 on Apprenticeship and Vocational Training contains information on the details of vocational training (MEB, 1986). This legislation defines the qualifications required for apprentices, the obligations of vocational training centers and the roles and responsibilities of interested parties. It also helps to structure a beneficial learning environment for learners and ensures that vocational training centers support the educational standards the government sets. The recent Industrial Cooperation Programme (ICP) Policy, launched in 2012, also promotes vocational training and apprenticeships. The policy promotes a well-equipped labour force that

meets the dynamic needs of industry by encouraging cooperation between industries and vocational training institutions (SPO, 2012).

Nowadays, in Vocational Training Centers in Türkiye, where traditional apprenticeship, journeyman and mastership training is provided, students receive education at school one day a week and receive skills training in enterprises on the other days. Vocational Training Center also supports students with a wage of one-third of the minimum wage during the four-year education. Moreover, to benefit from Vocational Education Centers, it is sufficient to be a secondary school graduate and no age limit exists. Therefore, Vocational Training Centers also provide important opportunities for Syrians outside the education-age population to enter the labour market (Özer, 2021).

Vocational Education Center students receive theoretical training at school one day a week and practical training in enterprises four days a week. Apprenticeship training lasts three years, and journeyman training lasts one year. 9th, 10th and 11th-grade students attending the vocational education center receive at least 30% of the minimum wage, and 12th-grade students receive at least half of the minimum wage. Vocational Education Center graduates can open their workplaces by obtaining "Master's Certificate" and "Vocational and Technical Anatolian High School diploma". Those who have a master's certificate have a "Master Teacher" certificate with "Business pedagogy training" for the employment of apprentice students (MEB, 2017). In addition, a series of regulations have been implemented to reduce the costs of a specialised labour force. In the Official Gazette published on 4 January 2022, it was decided to extend the period for the payment of the State contribution from the Unemployment Insurance Fund for five more education and training years, effective from the beginning of the 2021-2022 education and training year. The incentives in question are explained as follows:

1. The period that the payments to be made to candidate apprentices and apprentices and students who receive vocational training, internship or complementary education in

enterprises cannot be less than thirty per cent of the net amount of the minimum wage,

2. The period during which the payments to be made to the 12th-grade students of vocational education centers who gain the journeyman qualification cannot be less than fifty per cent of the minimum wage,

3. The minimum wage that can be paid to students studying in schools and institutions other than vocational education center programmes;

- Two-thirds of enterprises employing less than twenty staff,

- One-third for enterprises employing twenty or more personnel,

- The entire minimum wage that can be paid to students attending the vocational training center programme,

- It was decided to extend the period for the payment of the State contribution from the Unemployment Insurance Fund for five more academic years, effective from the beginning of the 2021-2022 academic year.

Özer and Suna (2022) evaluated the performance of vocational education center programmes in the first three months of 2022 after the amendment to the Vocational Education Law No. 3308. The results of the study show that due to the improvements made, the demand for MEM programmes has increased, approaching the 1 million target and the coverage of the programmes has increased significantly. Kazak et al. (2023) aimed to assess the impact of recent changes in vocational education on employment outcomes, especially from the perspective of employers. The study's findings reveal a need for technological upgrading and renovation of workshops and laboratories in these schools as they play a crucial role in preparing students for the demands of the labour market. It was also pointed out that the workshop equipment and machinery are seriously outdated. Considering the old structure of the existing workshops and laboratories, it is clear that students cannot receive the necessary training to obtain the certificates required by modern standards.

Vocational Training Centers act as a bridge between the business world and educational institutions in Türkiye, training skilled labour to

meet industry needs. This study was completed especially after the new incentives mentioned above came into force. In this way, it aimed to obtain findings on how the new incentive regulations affect employers and their views on school-industry cooperation.

## Methodology

The qualitative research method was preferred in the study. Creswell (2016) recommends using qualitative research to explore a problem and/or phenomenon. According to Yıldırım & Şimşek (2016, p.41), qualitative design is research method in which data are collected using qualitative techniques (such as observation, interview, and document analysis) and a realistic and holistic qualitative process is followed in order to reveal perceptions. This design generally provides flexibility for researchers to explore events. Exploratory research, a qualitative research method, is generally preferred to diversify and elaborate the data collected from the field. It can also be used in situations that have not been previously studied or where data collection may be partially difficult (Bengtsson, 2016). In this context, data were collected through in-depth interviews with semi-structured interview questions. The semi-structured interview technique (Magilvy & Thomas, 2009) is used in the data collection because semi-structured interviews often provide significant flexibility to researchers and participants (Miguel, 2011) and guide the topic under investigation.

In the study, in-depth face-to-face interviews were conducted with the participation of 12 employers operating in OSTİM in Ankara province, employing workers who continue their education in Vocational Training Centers and operating in different sectors. Before the face-to-face interviews, a semi-structured interview form was sent to the participants together with the informed consent form. Then, planned interviews were conducted with the participants at their production facilities.

In line with the ethical approval given by the Ethics Committee of Ankara Yıldırım Beyazıt University (No: 13 Date: 06.07.2022) and the

permission given by the Ministry of National Education numbered E-14588481-605.99-55392933 and dated 17.08.2022, the interviews were conducted with the participants who were randomly selected among the employers who are in cooperation with OSTİM Vocational Training Center and who accepted the interview. We selected the participants using maximum variation sampling to ensure representativeness and maximise the diversity of people related to the research problem. However, this sampling technique is not to generalise the findings but to reveal any phenomena shared in different situations and to reflect different aspects of the problem (Yıldırım & Şimşek, 2016).

The research was conducted with 12 employers in total. One of the participants is female, and the other 11 are male. Their age ranges from 30 to 75 years old. Their educational background ranges from primary school to postgraduate level. Participants have been working in the same profession for at least six years and have been working in the same profession for more than 20 years on average (Table 1). The enterprises operate in seven business sectors (Defence, Automotive, Welding, Metal Products, Medical, Plastics, and Exhibition).

Table 1. Participants Characteristics

Code	Gender	Age	Marital Status	Education Level	Sector	Seniority
P1	Male	41	Married	Primary School	Exhibition/Exhibition	6
P2	Male	40	Married	Primary School	Automotive	28
P3	Male	30	Married	Vocational High School	Defence Industry	10
P4	Male	71	Single	Bachelor's degree	Medical	30
P5	Male	75	Married	Primary School	Metal Products	32
P6	Male	43	Married	Middle School	Auto Industry	32
P7	Woman	32	Married	High School	Source	10
P8	Male	33	Married	Master's Degree	Automotive	16
P9	Male	38	Married	Middle School	Defence Industry	22

P10	Male	36	Married	High School	Defence Industry	18
P11	Male	45	Married	Middle School	Defence Industry	33
P12	Male	47	Single	Primary School	Plastic	30

### Findings

In the study, three categories were identified in the theme of VTCs for employers. The first of these is the difficulties employers face in working life, the second is their views on the current situation of VTCs, and the third category is the expectations of employers regarding VTCs. A total of 8 codes were analyzed under these headings (Table 2).

Table 2. List of Themes-Codes Determined According to Research Findings

	Theme	Code
Vocational Training Centers from the Employers' Perspective	Problems for Employers	Employee Supply
		12-Years Compulsory Education
	Opinions on the Current Situation of VTCs	Being Aware of VTCs
		Certificate of Mastery
	Employers' Expectations	Working Hours
		Minimum Wage
		Curriculum Work Life Alignment
		A Mechanism Bringing Students and Employers Together

### Difficulties / Obstacles in Working Life Staff supply

Employers stated that recruitment is the most significant challenge they face in the industrial sector. The difficulties they face in this regard have been brought together by the fact that asylum seekers in Türkiye, especially Syrians, must find a job to make a living. While this situation contributes to the harmonisation of asylum seekers, the presence of migrants has become indispensable for employers. At this point, the differences between foreign and Turkish employees have pushed employers to employ foreigners in a registered or unregistered manner. It is known that the industrial sector in Türkiye has

been experiencing problems in recruitment for many years. Employers in the industrial sector, who have difficulties, especially in the supply of intermediate staff, state that the people they employ do not have the desired level of skills. While employers state that the reason for the problem they face in recruitment is primarily supply-side deficiencies, they attribute the widespread occurrence of this problem to the fact that the industry and the education system are disconnected from each other (Koca, 2020). One of the essential problems in vocational and technical education is the quality problem. It is thought vocational-technical education students cannot acquire the professional competencies required by their level. This opinion is expressed by both teachers working in vocational education, students and employers. The employers believes that the qualifications of vocational and technical education students do not meet the needs of the labour market (MEB, 2021).

One of the important findings of the research is that employers cannot find Turkish citizens to employ in many areas of the industrial sector. Emphasizing that most foreigners are employed in the industrial sector, employers stated that they had to employ foreign workers because Turkish citizens did not want to work in these areas. This situation has led to the employment of asylum-seeker workers in areas where Turkish citizens do not work/do not want to work. The majority of the participants emphasized that in the scenario where asylum seekers leave Türkiye, there would be no employees to work in OSTİM. It was also stated that asylum seekers are obliged to work, whereas Turks do not have such an obligation.

*Everyone says Syrians and Iraqis should leave, but if they leave, we will not be able to find people to work. No one wants to work in the industry, the current generation wants to earn easy money. I don't believe anyone can earn money by sitting at a desk without going to the field. It was not my preference to employ foreign students. I have applied to İŞKUR many times. We are experiencing a serious shortage of staff. (P1)*

*If the Syrians leave, we cannot find people to work. (P6)*

*Look at this region now, you will find at most 20 Turkish employees. I employ foreigners because of the conditions. We have to. (P12)*

*If Syrians and Iraqis leave, the industry will be completely finished. Because we cannot find Turkish citizens to work for us. I employ Syrians out of necessity. If I could find Turkish citizens, I would not employ any of them because they do not take responsibility, so I follow their work. But if they were Turkish citizens, they would take responsibility and follow the work. (P2)*

*We can't find employees to work. Thank God we have these Syrians, and our industry has revived. They have nothing else to do, they love their jobs so much out of desperation (P7).*

*Not without Syrians. If these people leave, it is impossible for the costs to be lower, and since they do not provide insurance, the employer found a solution to keep his business going by employing foreigners (P8).*

Participant employers listed the reasons for not employing Turkish workers as high wage demands, dislike of work, inefficient work, lack of qualifications and technical knowledge. Employers expressed these views as follows.

*I don't prefer them. They want a higher salary and they want to do a comfortable job. When they come, they file a lawsuit for compensation or something like that, they make us work hard. They are incompatible anyway. (P12)*

*We do not have many employees. We can never find Turkish employees, [Turkish] people don't like work (P5).*

*You cannot even find a welder. The welder is the biggest shortage, there is no lathe sawing, there is no wood in the market. There are no Turks to train even a small car mechanic. It is difficult to train people after the age of 15-16. The 14-15-16 year olds who will grow up in the industry should be channeled into a job by inclining to this job. Syrians have been very useful and why. The children of our own citizens do not start work as apprentices. They will be 17-18 years old, we cannot find Turkish apprentices, I cannot even employ my own child, if he/she does not study, they somehow find a job after high school, and Syrians have also added to the mobility in the market. The truth is, I don't know if there are Turkish students in VTCs or not. No one applied (P6).*

*We are in Ostim, we have had these employees there for years. We wanted to train our own staff, but it is*

*very difficult to find welders among Turks. They do not know both in practice and theory. We have been dealing with this problem for years, the older ones work more slowly in terms of efficiency, and there is a bit of negligence, we could not get the efficiency we wanted. The welder is a problem in general (P7).*

As it can be understood from the opinions of employers, employers do not even want employees to claim their rights and therefore resist employing Turkish citizens. In particular, they characterise young people who do not want to work in heavy jobs as 'not liking work' and state that they cannot find Turkish employees. However, other studies (Hidayat, et al., 2016; Wygal, et al., 2021) show that this situation is not only in this sector, but also in many countries, especially in sectors that threaten health. In many heavy labour sectors, employees are moving away from these fields. Therefore, these views of employers do not provide us with accurate information about the approach of young Turkish citizens to work and work.

### **12 years of compulsory education**

In the scope of efforts to improve vocational and technical education in Türkiye, apprenticeship training was also included in 12-year compulsory education. With the amendment made by Law No. 6764, apprenticeship education within the scope of non-formal vocational education was included in the scope of compulsory formal secondary education. An important step was taken to meet the sector's need for qualified labour force by training masters through on-the-job training (MEB, 2017). Employers attribute the start of the 4+4+4 education system, i.e., the extension of compulsory primary education to 12 years, as one of the biggest reasons they have so much difficulty finding employees. They stated that with this system, the way for apprenticeship training was closed and that no one who has completed high school can be employed in this way. Participating employers criticized the inclusion of apprenticeship training within the scope of 12-year compulsory education for various reasons. First, they emphasized that students do not want to work as "apprentices" after 18 due to the increase in education and pointed out that apprenticeship training should be provided

from an early age. Participant employers explained this problem they faced in the following statements:

*You cannot be the master and boss of a job you have not apprenticed. We have been experiencing difficulties in recruitment for about 10 years. After 12 years of compulsory education, the age of labour has risen; there is no more education that raises children from childhood. Therefore, if he does not work until the age of 18, you cannot employ him here after the age of 18. (P1)*

*Türkiye has 12 years of compulsory education. Now, when you bring an apprentice to the industry after the age of 16-17, he cannot learn this job. I came at the age of 12. I came after primary school. When I say something, he reacts negatively. He leaves work and goes somewhere else. You can't become an apprentice at 18 anyway. He says, "I am 18 years old, I cannot do this". They have no desire to learn a job. The school system is completely wrong. You have to start at a young age and you have to do it willingly. I had my goals. I wanted to get a job and become a master (P2)*

*Something can be done to train more students for the market. There used to be 5-6-7 apprentices in a workplace. Now there is no such thing. After 4+4+4 started, there are no more apprentices in the industry. 12 years of compulsory education makes it very difficult for us to find employees (P3)*

*When 12 years of compulsory basic education became compulsory, apprentices were no longer trained. He will either pass the university exam. Either a doctor or a teacher. He doesn't want to see the filth of the industry. He doesn't come at 19 and work in the filth. Not everyone has to study. Let them go to the industry and get a profession. We ran out of trained craftsmen after 4+4+4 (P10).*

### **Opinions on Vocational Training Centers (VTCs)**

#### **Meeting methods with VTCs**

Effective communication between employers and VTCs is crucial to align vocational training with the needs of the industry. Such communication is often facilitated through various channels, including industry advisory boards, workplace training and internships, and frequent dialogue between employers and VTC staff. Participants learned about VTC through their friends, accountants, VTC teachers, workplace neighbours,

and students. Thus, having heard about them in a variety of ways, participants described their experiences in the following way, stating that their greatest motivation was the incentives provided:

*I learned about the centers through a friend. I was already thinking of insuring these friends. I learned that the school also pays their insurance (P2)*

*Our accountant heard it from somewhere and said let's make sure they are not unregistered. We don't want to have people we check in and out occasionally. After one week they may not come to work, they leave. They go to construction. They hear about it from their friends and go to other jobs (P9)*

*We learned about it through our neighbors at the workplace, I knew that he was giving training about these centers. They work one day at school and four days at the workplace and receive apprenticeship and mastership certificates. I applied to the center and they referred this friend (P3)*

### Reasons for Preferring VTCs

Vocational training centers emerge as an essential tool in ensuring school-industry cooperation. In this context, it has been observed that employers want to benefit from the incentives provided by the Vocational Education Law No. 3308 in case they employ students from vocational education centers. During the four-year training period, students are supported with a wage equal to one-third of the minimum wage and are insured against occupational diseases. The employment rate of graduates from vocational training centers, where traditional apprenticeship, journeyman and master's training is provided, is 88% in the fields in which they received training. It continues to be a very successful model (Özer, 2021).

For this reason, the incentives provided by the state are the basis for employers to recognize VTCs and employ students from these centers. Among the reasons for employers to employ students from VTCs, the factors encountered were registering employees, wage incentives and mastership certificates. The candidate apprentice is paid while on probation and insurance provisions are applied against illness and work accidents (Küçüköğlü & Kızıldaş, 2012). Most of the employers stated that when they employ students from VTCs, the payment of their insurance by the state

significantly reduces labour costs in this process. This is because the main reason for employers to employ students from VTCs is not to formalize their employees.

*The only benefit for me is that their insurance is paid by the state. It is also important for them to learn our profession. (P2)*

*A Syrian friend started working. We were trying to do it through social security institution (SSI) with classical methods. He was receiving training at OSTİM VTC. We got rid of the sums we had to pay for the work of the SSI (P8)*

*It was financially beneficial, they go one day a week and the state pays the insurance. Insurance would be an extra burden. Our work is dangerous, so there should be social security. It happened to us once. What would we do without social security? They were told by the teachers at the school. In my time, they didn't have high school graduate diplomas, but when something like this happened afterwards, it was so good that we had just opened, we were having financial difficulties, and the next thing you know, money came into your account (P11).*

Although there are widespread views that VTCs provide various benefits for employers, some employers emphasized that VTCs do not provide any benefits for them, but rather that the fact that students receive theoretical education at school one day a week is a disadvantage for them.

*It is not a benefit to the employer but a loss. For example, the child does not come to work that day but goes to school. He goes to school to fill the hours of the day. The child thinks that day is a vacation (P1).*

*He goes to school one day a week. He has been going for three years. He will get a master's certificate. The school did not help us at all, we only lost jobs in the vocational sense (P5).*

Another argument that employers mentioned among the benefits provided by VTCs is that they offer mastership certificates to students who graduate from these centers. Most employers stated that acquiring a certificate of mastership is necessary for the industrial sector and gives them an idea of what skills they have or do not have when hiring. They also see the acquisition of a master's certificate as a pioneering factor in the continuation of professions that are disappearing in the industrial sector and are not preferred by students.

*I also went to apprenticeship training, but only to get a diploma, not to learn the job (P1).*

*The diploma is very important. At the end of 4 years, I think it will reach a sufficient standard (P7)*

*The only benefit for me is that their insurance is paid by the state. It is also important for them to learn our profession. (P2)*

### **Certificate of mastership**

Despite the numerous benefits of apprenticeships, numerous studies show that post-apprenticeship master certificates offer additional value for workers (Winkelmann, 1996; Lerman, 2017). These certificates can enhance professional mobility, increase job satisfaction and enhance employability. Post-apprenticeship mastery certificates prove an individual's competence in their job and can significantly increase their competitiveness in the labour market. They also allow for higher wage prospects and increased job security. Furthermore, such certificates can increase employee confidence and job satisfaction (Winkelmann, 1996). In this research, it is understood that the certificate of mastery is an essential indicator for employers. Participants expressed this situation as follows:

*I also went to apprenticeship training, but only to get a diploma, not to learn the job (P1).*

*To be an expert in the job, to have previous experience. The diploma is very important. When I was hired, my father was the first person to do these jobs, master-apprentice, there is no other way. At the end of 4 years, I think it will reach a sufficient standard (P7).*

It can be seen that post-apprenticeship master certificates offer a considerable opportunity for workers to strengthen their professional positions and improve their career prospects. Therefore, they are an important factor to be considered in discussions on workforce development and employment policies.

### **Employer expectations**

#### **Night shift**

Participating employers expressed various expectations regarding increasing employment in the industrial sector and finding solutions to the

problems they face. The most important of these problems is the inclusion of apprenticeship training in the 12-year basic education system. This is followed by the harmonization of the curriculum in VTCs with business life, night shift regulation, minimum wage regulation, directing students to professions according to their capacity and skills, and establishing an effective mechanism that brings students and employers together. Some of the participating employers stated that the presence of students in VTCs for one day of theoretical training is a loss for them and that night shifts should compensate this lost time. In addition, some employers emphasized that working at night could be more productive and that work in the industrial sector is generally faster at night.

*We have a night shift. It would be very good if they could work in our night shift, but we cannot employ everyone in the night shift. In our sector, you learn the job at night. There is no opportunity to teach something during the day to develop the children. For example, we are busy during the day and we cannot concentrate on training due to shipments. As much as possible, you learn this job most easily at night. It is the most productive then (P3).*

*Apprenticeship students should be allowed to work night shifts. In the industry, we are able to recover mainly by working at night. We could not put an extra increase in labour. I gave a price of 50 liras at the beginning of the year. We are trying to compensate with night work. Now young people worry about how to earn money fast. Motorcyclists earn serious money. There are 300 liras of money left daily. Today's young people are trying to save the day, they do not think about their future (P10).*

### **Minimum wage regulation**

Employers believed that the minimum wage regulation should be differentiated in the industrial and service sectors. They expressed the expectation that the increase in wages in favor of employees in the industrial zone and in sectors that need intermediate staff will increase the demand for these jobs as follows:

*Right now the minimum wage is the same everywhere. Therefore, they prefer to work with clean clothes instead of dirty clothes for the same money.*

*Therefore, the minimum wage in the industry should not be the same as the minimum wage in other sectors (P3).*

*The minimum wage here (industry) will not be the same as the minimum wage of another workplace. We will pay high wages accordingly, but only then they will prefer it (P9).*

Another topic among the participants' expectations is the need to improve the minimum wage regulation in the industrial sector. Some of the participating employers stated that the minimum wage in the service and industrial sectors should not be equal, and that the minimum wage in the industrial sector should be higher than in the service sector. The main problem here is that students prefer to work in the service sector instead of the industrial sector. However, employers have no obstacle to paying more than the minimum wage. Therefore, although employers have such an expectation, this expectation has no practical equivalent.

### **Alignment of Curriculum and Work-Life**

Helping to align academic curricula with industry requirements plays a crucial role in clearly communicating learning objectives and skills. There is an urgent need for educational institutions to incorporate vocational training into their curricula, and industries should be encouraged to participate in these programs. Doing so will result in a competent and well-prepared workforce that can meet the needs and demands of the industry (Kelly & Price, 2009). In a system where even one day a week is very precious, employers see their employees going to school as a waste of time and work and stated that the formal education curriculum should be reshaped in line with the needs to benefit both themselves and their employees:

Some participants emphasized that the education in VTCs does not fully overlap with the education given in the workplace and stated that the workplace (industry) is more important for students to learn a profession. Participants expressed these views as follows:

*The information you receive in apprenticeship training is not even half of what you learn in industry. In other words, the technical knowledge they get at*

*school is insufficient in the industry. If he is a regimented person, if he has been trained from the nucleus, I think he is more knowledgeable and equipped than a school student. Apprenticeship training is not enough. They receive cursory training. (P1)*

*Will it add anything on top of what I have added because they have seen the basic courses? Maybe there should be practice there, but it is like that (P7).*

*I do not think that the school can be of any benefit in terms of vocational attainment (P8).*

### **A mechanism that brings students and employers together**

Effective communication is the key to successful collaboration between school and industry. It ensures that expectations, goals and feedback are shared accurately between all parties involved. It is possible to talk about the need for a mechanism that brings students and employers together to increase the efficiency of VTCs in training personnel, which is one of the most important problems of industrial zone employers. To narrow the gap in the need for intermediate staff in Türkiye and for students to benefit more from VTCs, employers have identified their need for an intermediary where they can explain themselves and the future of their professions and transfer their experiences with the following statements:

*İŞKUR has a website that brings workers and employers together. Ministry of National Education (MEB) can also establish such a mechanism. Employers and employees can communicate here (İ1)*

In 2022, the Ministry of National Education launched the "Digital Employment Matching Platform" in cooperation with MEB, İTO and İSO in order to carry out the employment mobility generated by the vocational training center programme in a faster and more effective manner and to meet an important need of enterprises regarding the field and qualified employment of apprentices, interns and graduates (MEB, 2022). However, it is seen that employers do not sufficiently understand and are not aware of this platform.

*Employer-teacher coordination should be increased. They don't choose the right department. They should be able to change departments, we should be able to go to schools and explain ourselves like career days at*

*universities, the future of the profession should be well explained to students. Schools should provide this (İ10).*

Another suggestion among the expectations of participating employers was the realisation of a mechanism that brings students and employers together. Curricula in all areas of vocational education were updated with the contributions of sector representatives and harmonized with National Occupational Standards (Özer, 2021, p.4-5). When the system of occupational standards, examinations and certificates is considered from the perspective of employers, it will enable employers to know what the skills and knowledge of the employees they will employ are and to make the right decision in the selection, remuneration and progression of the most suitable person for the job. This system will allow job seekers to prove their professional competencies, knowledge and skills without difficulty (Yalçın & Kılıç, 2015). Employer participant İ1 gave İŞKUR's web-based access system as an example of this mechanism, while participant İ10 pointed out the importance of career days at schools. With this mechanism, it will also be possible to direct students to professions according to their capacities and skills.

## Conclusion and Discussion

Becker's (1964) Human Capital Theory addresses the relationship between education and employment. Based on this theory, many studies support that vocational training can increase the economic value of individuals and, therefore, the importance of building a skilled workforce for employers. Compared to this theory, this article provides a perspective on the role of employers' vocational training centers in school-industry cooperation and their contribution to the business world.

Researchers such as Belfield and Levin (2002) highlight employers' need for vocational training programmes. These needs provide an essential context on how vocational training programmes can respond to labour demand and how employers can overcome their labour market challenges through this cooperation. The importance of vocational training programmes for employers mentioned in this study is also addressed by Leuven and Oosterbeek (2011). Many studies show

that vocational education programmes provide students with theoretical knowledge and practical skills and better prepare them for the labour market. In this context, vocational education programmes are much more meaningful institutions for the labour market as they provide students with theoretical knowledge and have one-to-one communication with the business world. Because vocational education programmes are complete with practical training. Practical training ensures the transformation of theoretical knowledge into practice and enables students to gain real-world experience (Livingstone, 2015). In addition to providing students with hands-on experience in workplaces, these trainings help students explore their potential careers and adapt to the expectations and demands in the workplace (Billet, 2014). However, the main problem is that school-industry coordination cannot be established at the desired level.

As a result of the data obtained, employers' opinions on Vocational Training Centers point to three main themes. The first of these themes is the difficulties experienced by employers in recruiting labour. Employers' difficulties in recruiting the labour force are attributed predominantly to extending primary education for 12 years. This raises the critical issue of how school-industry cooperation can affect recruitment processes. As noted in this study, employers emphasise the importance of students starting apprenticeships at a younger age. This points to an area where employers should play a more significant role in shaping the future workforce. This conclusion highlights the importance for MEMs to provide students with practical skills at an early age and better adapt to the demands of the labour market.

The second theme obtained from the research data is employers' opinions on Vocational Education and Training Centers. Within the scope of this theme, many employers associate the fact that students trained in Vocational Education and Training Centers have the right to a "master's certificate" in the occupational field they learn with employability. Therefore, for employers, a "master's certificate" is an essential indicator of success regardless of the occupational field. The mastership certificate, which increases students' employability, is necessary for school-industry

cooperation. The fact that employers express how vital the "certificate of mastery" is in terms of labour force participation shows that vocational education is an essential tool in training qualified graduates.

The third theme obtained from the research data includes the expectations of employers. Employers stated that the mechanisms that will bring students and employers together within the scope of school-industry cooperation should be expanded and disseminated. On the other hand, some employers also emphasised that the curricula of Vocational Training Centers should be more suitable for business life. Schultheiss and Backes-Gellner (2022) argue that the potential benefits of improving the educational content of vocational education and training (VET) programmes are significant in facilitating the widespread dissemination of innovative knowledge of emerging technologies. Other expectations of employers are to set the minimum wage specific to the industrial sector and to regulate working hours. In addition, the need to increase the attractiveness of the industrial sector, which is not seen as an attractive field of work by students, through special regulations is also among the crucial opinions emphasised. According to Hamermesh (1996), studies on employers' expectations, working hours regulations and wage policies provide clues on how to make cooperation programmes more effective.

In conclusion, the findings presented in this paper lay the foundation for a meaningful discussion on how school-industry collaboration within the context of vocational training centers can influence employer expectations, certification processes and government policies. This discussion can offer essential opportunities for better cooperation in vocational education and better labour force preparation. Cooperation between MEMs and employers plays a critical role in training skilled labour. Training institutions and employers have specific demands and expectations to ensure this cooperation model works effectively. Making cooperation more effective could be the key to producing graduates that better respond to the labour market's needs and contribute to general economic development. Vocational training centers prioritising school-

industry cooperation play an essential role in producing job-ready graduates that meet the labour market demands. Cooperation between these centers and employers leads to developing relevant curricula, practical experience and customised training. This approach benefits employers by reducing the skills gap and improving the overall quality of vocational training. As the global workforce continues to evolve, it is clear that school-industry solid collaboration will continue to be essential to create a well-prepared and skilled workforce. Therefore, governments should create an enabling environment by designing policies that foster school-industry partnerships. This includes measures such as providing incentives for industries to invest in education and training or providing updated curricula aligned with industry trends.

### **Practical implications**

To improve apprenticeship training in Turkey and strengthen school-industry cooperation, you can consider the following suggestions:

**Update VET Programmes:** Vocational high schools and vocational colleges should design training programmes more closely aligned with industry requirements. These programmes should be continuously reviewed and updated with the participation of employers and sector representatives.

**Establish School-Industry Cooperation Platforms:** Establish local, regional or national cooperation platforms to support and facilitate continuous communication between industry and education institutions. These platforms can help coordinate the needs, resources and expectations between the two parties more effectively.

**Promote the Apprenticeship System:** The apprenticeship system in Turkey should be further promoted and popularised. Campaigns should be organised to make apprenticeships attractive, especially among young people. Vocational schools and employers should co-operate to promote this training and encourage youth participation.

**Provide Internships and Job Guarantees:** Make apprenticeships more attractive by offering

learners more internships and job guarantees. Employers can commit to hiring successful learners. This can provide more motivation to learners.

**Expert Teacher Training:** Provide ongoing training for teachers in vocational schools to keep up to date with industry developments. Also, invite industry experts into schools and classrooms to provide real-world experiences for students.

**Industry Standardised Hardware and Equipment:** Vocational schools and cooperating businesses should have state-of-the-art equipment and facilities. This allows students to learn and experience up-to-date technology.

**Improve Apprenticeship Salaries:** Make the apprenticeship programme more attractive by offering apprentice students a better salary. This can help students cover living costs and allow them to support their families.

**Career Counselling:** Schools should provide students with information about job opportunities. Career counsellors should guide students on career choices and help them connect with employers.

**Programme Diversity and Standards:** There may be gaps in the standards and diversity of apprenticeship training programmes in Turkey. The consistency and currency of programmes in different sectors may need to be questioned.

**Reward and Recognition Programmes:** Establish reward and recognition programmes for successful apprentices and employers. This can encourage learners' effort and increase employers' participation in the apprenticeship programme.

These recommendations can be a starting point for improving apprenticeship training and strengthening school-industry co-operation in Turkey. Adopting various approaches to suit local needs and sector requirements is also essential.

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